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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,044	01/19/2001	Melvin N. Miller	7420-061-999	9617
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PENNIE AND EDMONDS			EXAMINER	
1155 AVENUE OF THE AMERICAS NEW YORK, NY 100362711			DONOVAN, LINCOLN D	
			ART UNIT	PAPER NUMBER
			2832	
			DATE MAILED: 02/13/2003	•

Please find below and/or attached an Office communication concerning this application or proceeding.



Application No. 09/766,044

Applicant(s)

Miller et al.

Office Action Summary

Examiner

Lincoln Donovan

Art Unit 2832



Period for Reply A SHORTEND STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE3MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. THE MAILING DATE OF THIS COMMUNICATION. It is the corronalization. If the period for reply appelled above, the materian metatory period will easily any will easily 20,18 (MoNTHS from the mailing date of this communication. If the period for reply a specified above, the materian metatory period will easily 20,18 (MoNTHS from the mailing date of this communication. If the period for reply a specified above, the materian metatory period will easily 20,18 (MoNTHS from the mailing date of this communication. If the period for reply a specified above, the materian metatory period will easily 20,18 (MoNTHS from the mailing date of this communication. If the period for reply a specified above, the materian metatory period will easily 20,18 (MoNTHS from the metalling date of this communication. If the period for reply a specified above, the materian metatory period will easily 20,18 (MoNTHS from the metalling date of this communication. If the period for reply is specified above, the material specified and the communication. The period for reply is specified above, the material specified and the communication. If the period for reply is specified above, the metalling date of the communication. If approach the application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213. Disposition of Claims If approach (claims) If a period (claims) I	٠	The MAILING DATE of this communication appears of	on the cover sheet with the correspondence address
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	_	·	6) Other:

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▶ Art Unit: 2832

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of the restriction in Paper No. 10 is acknowledged. The traversal is on the ground(s) that no serious burden is placed on the examiner to search two additional groups. This is not found persuasive because the analysis of the RF field and method making the device are significantly different from the device structure itself.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

2. Claims 1, 18 and 50 are objected to because of the following informalities: In claim 1, line 4, "at least portion" should be corrected as -- at least a portion --. In claims 18 and 50, "to provide path" should be -- to provide a path --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 4. Claims 16-17 and 63-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claims 16 and 63, applicant should clarify the structure intended by the magnet assembly being "further adapted to receive within the enclosed volume core material from drilled rock."

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Claim Rejections - 35 USC § 103

- 5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 6. Claims 1-14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer [US 4,703,276] in view of Yamaguchi et al. [US 4,931,760].

Beer discloses a magnet assembly [11] for an NMR system comprising: at least four pairs of wedge-shaped magnets [figure 1] arranged to surround a tubular volume of space and provide in at least a portion of the surrounded volume a cylindrically shaped *substantially* homogeneous magnetic field [column 2, lines 62-64], the magnets of each pair being disposed diametrically opposite each other with respect to the surrounded volume with magnetization directions having *substantially* the same orientation [figure 1] and adjacent magnets of the assembly being separated by gaps.

Beer disclose the instant claimed invention except for: the magnet assembly being used in an MRI system.

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Yamaguchi et al. disclose a magnet arrangement for an MRI system comprising pairs of

magnets surrounding a volume to from a uniform field therein.

It would have been obvious to one having ordinary skill in the art at the time the invention was

made that the magnet arrangement of Beer could have been used in an MRI system, as suggested by

Yamaguchi et al., for the purpose of controlling the field inside the surrounded volume.

The specific permeability of the magnets used for the imaging system would have been an

obvious design consideration based on the desired magnetic field strength.

Both Beer and Yamaguchi et al. disclose the magnets being separated from each other and

would inherently have a non-homogeneous, or heterogeneous, magnetic field produced in the gap

therebetween.

The specific spacing of the magnets and angular displacement would have been an obvious

design consideration based on the number of magnet pairs used and the desired field to be produced

thereby.

Beer shows the magnets arranged in the claimed orientations.

7. Claims 15, 42-19 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beer

in view of Yamaguchi et al. as applied to claim 1 above, and further in view of Miyata [US

5,148,138].

Beer, as modified, disclose the instant claimed invention except for: the number of magnet

pairs being greater than 2.

Miyata discloses a cylindrical magnet apparatus having at least 6 magnet pairs.

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To have 6, or more, magnet pairs used within the system would have been an obvious design

consideration based on the desired sensitivity and strength of the magnetic field to be produced, as

suggested by Miyata. It would have been obvious, it order to maintain the homogeneous field to

adjust the field orientation in accordance with the number of magnets used in the system.

8. Claims 18 and 50-61 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Beer in view of Yamaguchi et al. as applied to claims 1-17 above, and further in view of

Toyoshima et al. [US 4,727,327].

Beer, as modified, disclose the instant claimed invention except for: a ring surrounding the

magnets.

Toyoshima et al. disclose a ring structure [37] surrounding the magnets.

It would have been obvious to one having ordinary skill in the art at the time the invention was

made to use a ring structure in the magnet arrangement of Beer, as modified, as suggested by

Toyoshima et al., for the purpose of providing adjustment of the magnetic field within the surrounded

volume.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Examiner Lincoln Donovan whose telephone number is (703) 308-3111.

The fax number for this Group is (703)-872-9318.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1782.

LDD

February 5, 2003

LINCOLX DONOVAN PRIMARY EXAMINER GROUP 2100